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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-9, 13-29, 33-49, 53-57, 58, 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (6,377,562) in view of Perreault et al. (5,608,727).

Regarding claims 1, 21 and 41, Schneider discloses a method of operating a probe device, a software product and a probe device in a broadband wireless system (high data bandwidth portion of WASL communication, see col. 4, lines 62-64), the method comprising: receiving a message (feature of signals received from WASL subscribers by the radio tower, see col. 4, line 65 to col. 5, line 2), processing the message to determine channel information describing use of each of a plurality of channels in the broadband wireless system by each of a plurality of users (data recovery from signals received from the bandpass filter by processor 32 in accordance with the particular cellular communication utilized, see col. 5, lines 8-49), storing the channel information in a memory in the probe device (signals transmitted by channel probe 16 and returned from the subscriber station, see col. 7, lines 18-65), and transferring the channel information from the memory to a user system (adjusting the transmission bit rate based on feedback signals, see col. 7, lines 18-65). Schneider fails to explicitly disclose channel information describing actual use of each of a plurality of channels in the broadband wireless system is determined.

In an analogous field of endeavor, Perreault discloses a system for frequency spectrum management for dynamic spectrum usage adjustment among applications on a shared medium wherein a spectrum manager allocates channels based at least in part on information for quality and usage metrics for each of the channels allocated for the use of the application (see Fig. 2, step 204, col. 2, lines 52-67, col. 4, lines 18-59). According to Perreault, the RF spectrum is allocated for multiple applications, e.g., data, voice, and video, in a broadband cable network (see col. 3, lines 1-10), which makes Perreault pertinent to the instant application.

It would therefore have been obvious to one of ordinary skill in the art to combine Perreault's spectrum management system with Schneider's wireless local loop communication system in order to optimize allocation of available spectrum of varying quality to multiple users as taught by Perreault.

Regarding claims 2, 3, 22, 23, 42 and 43 Schneider further discloses wherein the channels are upstream and downstream (downstream direction to users and upstream, see col. 3, lines 30-39).

Regarding claims 4, 24 and 44 Schneider further discloses wherein the message is a credit that allows usage of one of the channels (monitoring of signal character of the individual sub-carriers and the bit error rate performance at the subscriber premises and transported to the base station, see col. 5, lines 17-23).

Regarding claims 5, 25 and 45 Schneider further discloses wherein the message indicates a completion of usage one of the channels (see col. 7, lines 56-65).

Regarding claims 6, 26 and 46 Schneider further discloses wherein the probe is connected to a switch in the broadband wireless system (feature of ATM switch being part of WASL, see col. 2, lines 49-66, col. 4, line 59 to col. 5, line 16).

Regarding claims 7, 8, 27, 28, 47 and 48 Schneider further discloses wherein the probe device is connected to an upstream manager and a downstream manager in the broadband wireless system (see channel probe of WASL transmission base station of Fig. 1).

Regarding claims 9, 16, 17, 29, 36, 37, 49, 56 and 57, Schneider further discloses wherein the message comprises determining a state of the channels and the channel information comprises a change in a state of one of the channels (channel quality and/or bit error rate for each channel being fed back dynamically from the user, see col. 3, lines 61-67).

Regarding claims 13, 20, 33, 40, 53 and 60 Schneider further discloses determining a time in the state (feature of token controller determining how long a data source may send its data after 'capturing' the token, see col. 6, lines 36-44).

Regarding claims 14, 15, 18, 19, 34, 35, 38, 39, 54, 55, 58 and 59 Schneider's teaching of each user requiring a particular data throughput rate and quality of service (see col. 6, lines 17-21) and being able to accommodate different subscriber options including adjusting output data bit rate for each buffer separately, (see col. 6, lines 30-35) reads on monitoring a number of bytes transmitted and number of messages transmitted during a state of one of the channels.

5. Claims 10-12, 30-32, and 50-52, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider and Perreault et al. as applied to claims 9, 29 and 49 above, and further in view of Moura et al. (6,411,606).

Regarding claims 10-12, 30-32 and 50-52, Schneider as modified by Perreault fail to explicitly teach wherein the state is polling dedicated or idle.

Moura discloses a hybrid access system for extending a high-speed network to remote locations wherein state of a channel is determined by polling (see col. 2, lines 44-67), in the dedicated state (see col. 5, lines 15-24, col. 5, lines 34-59), and in an idle state (see col. 2, lines 58-60).

It would therefore have been obvious to one of ordinary skill in the art to combine Moura's hybrid access system with Schneider's WASL communication system as modified by Perreault in order to combine the flexibility of a full duplex network with the effectiveness of a broadcast network at a reasonable cost using a credit allocation system as taught by Moura.

Response to Arguments

Applicant's arguments filed April 11, 2007 have been fully considered but they are not persuasive.

The Applicant argues the combination of Schneider and Perreault fails to teach channel information describing actual use of each of a plurality of channels in the broadband wireless system by each of a plurality of users. The Examiner respectfully disagrees. Schneider discloses data recovery from signals received from the bandpass filter by processor 32 in accordance with the particular cellular communication utilized

(see col. 5, lines 8-49) fulfilling the limitation of channel information describing...each of a plurality of channels in the broadband wireless system by each of a plurality of users. Perreault is relied upon to teach the actual use. Perreault discloses a system for frequency spectrum management for dynamic spectrum usage adjustment among applications on a shared medium wherein a spectrum manager allocates channels based at least in part on information for quality and usage metrics for each of the channels allocated for the use of the application (see Fig. 2, step 204, col. 2, lines 52-67, col. 4, lines 18-59). According to Perreault, the RF spectrum is allocated for multiple applications, e.g., data, voice, and video, in a broadband cable network (see col. 3, lines 1-10), fulfilling the claimed limitations.

The Applicant argues Schneider fails to disclose credit messages. The Examiner disagrees and maintains the monitoring of signal character of the individual sub-carriers and the bit error rate performance at the subscriber premises and transported to the base station (see col. 5, lines 17-23) reads on the broadest reasonable interpretation in light of the specification of the claimed limitation.

The Applicant argues Schneider fails to disclose the probe device is connected to an upstream manager. The Examiner respectfully disagrees. Schneider discloses feedback signals originating from the probe device (see column 7, lines 18-65), fulfilling the claimed limitations.

The Applicant argues Schneider fails to disclose a channel state. The Examiner respectfully disagrees. The Examiner maintains the channel quality and/or bit error rate for each channel being fed back dynamically from the user (see col. 3, lines 61-67)

reads on the broadest reasonable interpretation in light of the specification of channel state.

The Applicant argues Schneider fails to disclose determining a time in the state. The Examiner respectfully disagrees and maintains the feature of token controller determining how long a data source may send its data after 'capturing' the token (see col. 6, lines 36-44) reads on the broadest reasonable interpretation of the claim language in light of the specification.

The Applicant argues Schneider fails to disclose monitoring or storing as channel information a number of bytes or messages transmitted. The Examiner respectfully disagrees and maintains the teaching of each user requiring a particular data throughput rate and quality of service (see col. 6, lines 17-21) and being able to accommodate different subscriber options including adjusting output data bit rate for each buffer separately, (see col. 6, lines 30-35) reads on the broadest reasonable interpretation in light of the specification of monitoring a number of bytes transmitted and number of messages transmitted during a state of one of the channels.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bryan Fox



CHARLES N. APPIAH
SUPERVISORY PATENT EXAMINER